Netflix for the $360 Billion Professional Development Market

v4.2

Abstract

Education Ecosystem is a decentralized peer-to-peer project-based learning platform for people to improve their job skills in future technologies. The company is building Netflix for professional development and targeting the $360 billion professional development market. Education Ecosystem is developing a project-based learning platform to help students and professionals advance their careers. The main participants in the ecosystem are project creators, viewers, moderators, API developers, colleges, schools, libraries, businesses, and other online education companies. The learning platform is building the world's largest project-based learning network starting with the six topics: artificial intelligence, blockchain, cybersecurity, data science, game development, and programming. The ecosystem will be expanded by adding more topics in the future, with the aim of building a decentralized professional development ecosystem focusing on gaining practical career skills through building real products rather than relying on learning theory. Project creators create educational projects and are paid with LEDU and cash for teaching viewers. This paper explains the token mechanics for the LEDU smart contract blockchain tokens and how the LEDU token will be integrated into the whole product consisting of internal and external networks.

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1. Introduction and Executive Summary

1.1. Executive Summary

Education Ecosystem is a decentralized peer-to-peer project-based learning platform for people to improve their job skills in future technologies. In building the Netflix for professional development, the company is targeting the $360 billion professional development market. The startup is developing a viewer-based platform to advance the careers of students and professionals. The ecosystem consists of the internal and external networks. The internal ecosystem participants are project creators, viewers, community moderators, project quality moderators, and API application developers. The external ecosystem participants are businesses, schools, libraries, colleges, and other professional development companies. Over 5 million people from 194 countries have used the product since the alpha version was launched - with a focus on software development projects - at the end of 2015. The beta product soon followed and more than 13,000 project creators have created over 200,000 pieces of video content. The company launched free projects in the areas of artificial intelligence, blockchain, cybersecurity, game development, data science, and programming. In the future, a pay-per-view monetization model will be implemented. Viewers will pay for the video projects they watch to build complete products.

There is no online project-based learning platform that teaches professionals and college students who have passed the beginner stage how to build complete products. Education Ecosystem does not target beginners but those who have more than basic introductory knowledge - intermediates and experts - of a field. College students and professionals working in artificial intelligence, blockchain, cybersecurity, data science, game development, and programming use the project-based platform to advance their career prospects. Viewers based in the US, China, Europe, Brazil, and other regions utilize the platform's video projects to learn how to build complete products.

Education Ecosystem is building a blockchain smart contract technology on top of the Ethereum blockchain using ERC20 tokenization mechanics. LEDU smart contracts will be used for payments and rewards on the ecosystem. A native protocol will be launched when the development of the external ecosystem is complete.
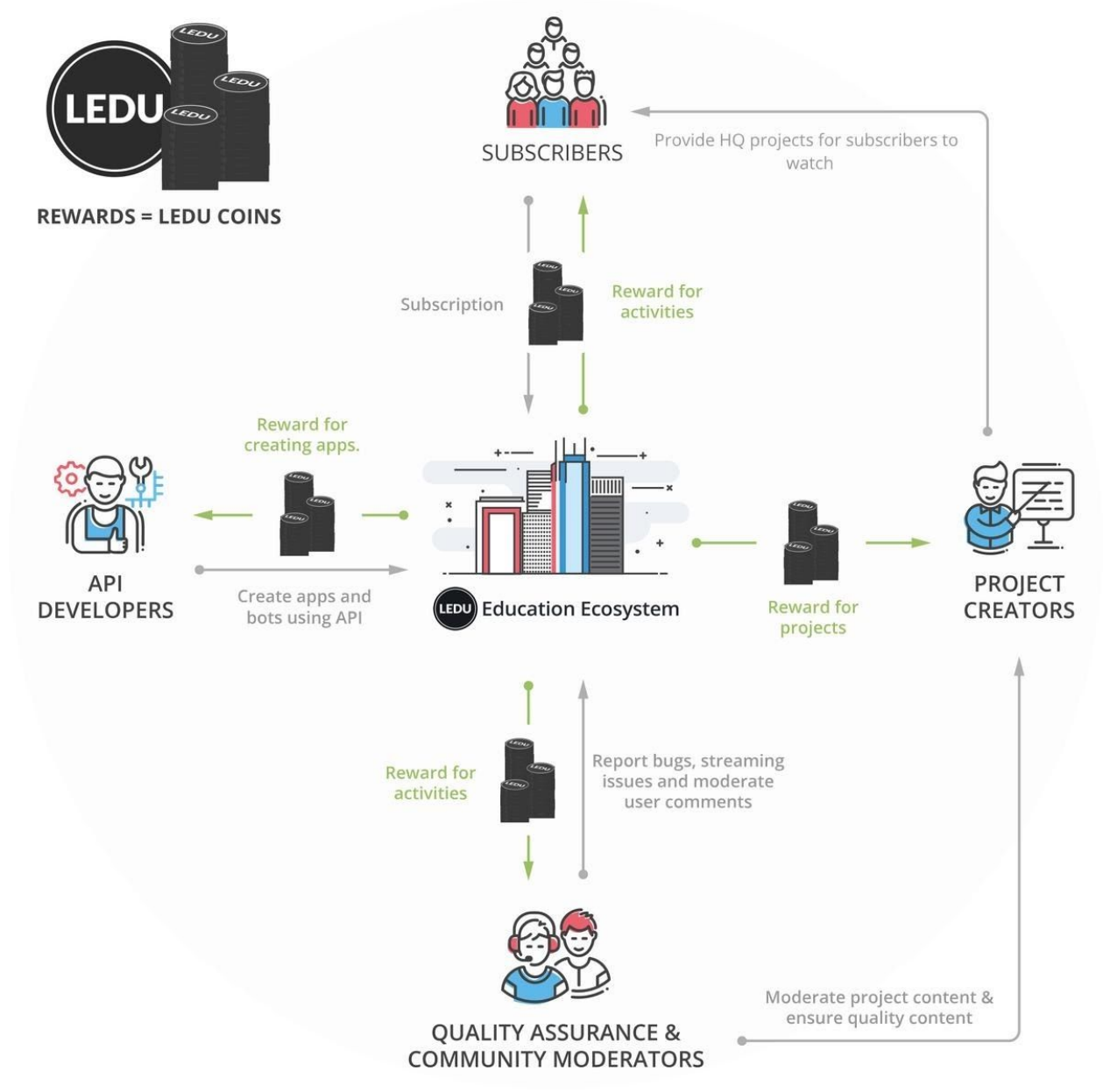
The Education Ecosystem network is a classic model [highly suitable](#) for blockchain smart contract tokenization. The blockchain will decentralize key product development decisions that are made on both the supply and demand sides of the ecosystem. Tokenization will help the startup build its network faster on both the demand and supply sides.

Supply-side

- The company does not create content itself but provides a peer-to-peer network that connects project creators with viewers around the world.
- The project-based platform plans to use tokenization as a key approach to solving the chicken-and-egg marketplace problem by incentivizing early project creators with a mix of LEDU tokens and cash.
- Tokenization will enable the startup to bind project creators because they will have a shared interest in the long-term success of the project.
- The platform plans to use token buyers, who have subject matter domain expertise, to create projects. Token holders are interested in the six technical categories the project focuses on. The plan is to use some token holders for project creation.

Demand-side:
- The success of the platform will depend on creating content that viewers want to watch. So far, project creators have decided which projects to create, frequently deviating from what viewers want to watch. Tokenization will empower viewers who are token holders to vote on which topics and product features to add next. This will transform the platform from a supply-side-driven marketplace to a demand one.
- Tokenization will enable the project-based platform to launch a native payment currency embedded into the product and used for all payment transactions.
- Tokenization will enable Education Ecosystem to reward site supporters, moderators, and API developers. Using LEDU tokens without spending large sums of fiat upfront reduces business risk.

LEDU token holders benefit from:
- The ability to use LEDU tokens for voting on key decisions in the network.
- Growth of the LEDU network through the addition of Chinese, Russian, and Portuguese projects.
- Growth of the LEDU network by adding more categories in the future.

Education Ecosystem does NOT compete directly with existing professional development platforms, as it focuses on practical projects (project-based learning) and users who have passed the beginner stage (intermediates and experts).

	LEDU Education Ecosystem	lynda.com A LINKEDIN COMPANY	PLURALSIGHT
Learning model	Projects	Courses	Courses
Complete products	✓	✗	✗
Learning type	Real practical, production level work	Theoretical	Theoretical
Content creation cost	Low	High	High
Content creation speed	< 1 week	3 months	3 months
Target users	Intermediates, experts	Begginers, intermediates	Begginers, intermediates
Descentralized peer-to-peer	✓	✗	✗

Compared to the indirect competitors Lynda, Pluralsight, and Udemy:
- Education Ecosystem does not have expensive content production costs (< $500 per project).
- Project completion speed on Education Ecosystem is faster (< 1 week).
- Education Ecosystem uses only project-based learning.
- Real practical projects and real production level work.
- Viewers watch how to build a complete product.
- Education Ecosystem is a peer-to-peer (decentralized) network , which gives it access to a bigger project creator pool.

The seasoned team is led by co-founder and CEO Michael J. Garbade. As a young team of business-oriented professionals, educators, back-end engineers, front-end developers, and tech marketers with work experience from Amazon, General Electric, Photobucket, Rebate Networks, and more; the team has extensive sector domain expertise in the education and video streaming spaces. Moreover, the team spent several years building Education Ecosystem and has gathered enormous insights on user acquisition, content management, monetization models, non-monetizable use cases, and market data. The company has gathered a group of advisors who include CoinAgenda Founder Michael Terpin, Starbase founder Tomoaki Sato, serial entrepreneur Oli Slipper, co-founder of Perform Group and Masomo; Founder and CIO of Coinhills, Francisco Jo; and Founder and COO of KR Token Isaac Lee.

The shift from non-structured casual streaming (free projects) to focus on monetizable projects (paid projects) represents the only change to Education Ecosystem's business

model. The platform managed to scale the network and business right after the token sale:

- Established team with experience in building education and video streaming products.
- The company is supported by a technically-strong team. The entire video streaming infrastructure was built from scratch with 50 edge servers worldwide.
- Extensive data on cost-effective user acquisition channels.
- Completed experiments on monetization models.
- Over 13,000 project creators with no paid marketing.
- Existing users will be retained with an attractive economic model.
- Strong viewer base interested in projects that meet their needs.

The company's target users are very familiar with live and video streaming. It is part of their everyday activity. Media streaming platforms like Twitch, YouNow, and Meerkat popularized live streaming, while YouTube popularized video streaming. These media streaming channels provide online entertainment; while, very distinctively, Education Ecosystem focuses on professional development.

The ecosystem is building the world's largest project-based learning network. The project-based platform mission is audacious and targets the $360 billion professional development market.[1] The platform aims to develop a decentralized professional development ecosystem that is not reliant on learning theory but gaining practical career skills through building real products. The peer-to-peer network connects project creators and viewers from all over the world. Project creators will create educational projects and earn a LEDU tokens and cash fee when viewers watch their projects.

Education Ecosystem also seeks to bring cryptocurrency to the masses by educating college students and professionals about blockchain; through practical projects covering cryptocurrency basics, blockchain mining, Bitcoin, Ethereum, security and hacking, and token sales.

The company's token is called "Education token", having the abbreviation "LEDU" and based on the Ethereum ERC-20 standard. LEDU tokens will be fully integrated into all core modules and transactions on Education Ecosystem. LEDU tokens are the payment method for financial transactions that reward project creators, viewers, site moderators, and API developers.

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[1] Size of the Training Industry. Training Industry. April 20, 2017.
https://www.trainingindustry.com/blog/outsourcing/how-big-is-the-training-market/.

The peer-to-peer network has been featured in Mashable, Venturebeat, TechCrunch, Habrahabru, Spiegel, Opensource.com, Pingwest, Business Insider, and many leading tech blogs in China, Brazil, and Russia.

1.2. Team, Token Sale Advisors and Partners

The company conducted its token sale through the legal entity Livecoding Ltd with the company registration number 09346459, incorporated in London, England.

Dr. Michael J. Garbade is a serial entrepreneur, hybrid business executive and Python engineer who enjoys building applications in Python, Django, and Sencha Touch. He co-founded and exited the e-Commerce cashback platform Kyuda and ran business operations for multiple start-ups at Rebate Networks. He previously worked at Amazon, GE, and Photobucket. From past projects, he is experienced in building live music and video streaming applications using Wowza, NGiNX RTMP and Red5. He has a Masters in Business Administration and Physics and a Ph.D. in Finance. He speaks English and German and has worked in the US, Europe, and Asia. At Education Ecosystem, he is the CEO and runs business operations. He has been involved with multiple bitcoin and cryptocurrency startups. A few years ago, he built the Bitcoin education quiz app Bitcoinmillionaire on Android, iOS and the Web. Initially created as a personal side project, he plans to add it to the list of projects on Education Ecosystem and open-source the codebase so other developers can develop it further.

Ilya Toka is an experienced JavaScript developer with experience building React.js applications. As a self-taught programmer, he worked in different positions at several companies including Criterion and NGO. At Education Ecosystem, he develops the front end part of the application.

Artem Merkulov is an accomplished software developer with years of experience in developing applications using Python and Django. He has experience as a project management lead and Linux server administrator. Prior to joining Education Ecosystem, he worked on software for enterprise-level and e-commerce companies. Since joining the company, Artem has been involved in backend application development with Python/Django, deployment and scaling of apps and administering development tools and infrastructure. Artem works with other engineers to integrate blockchain technology into Education Ecosystem's products and power the network with LEDU tokens.

The company's group of advisors include CoinAgenda Founder Michael Terpin, Starbase founder Tomoaki Sato, serial entrepreneur Oli Slipper, co-founder of Perform Group and Masomo; Founder and CIO of Coinhills Francisco Jo; and Founder and COO of KR Token Isaac Lee.

Running a technically flawless blockchain project can be challenging for a startup. Consequently, Education Ecosystem partnered, early on, with the reputable and experienced technical blockchain advisory firm, [New Alchemy](#), for guidance in all aspects of the token sale including smart contract development, token security, token mechanics, token allocation, white paper writing, and token deployment. Managing Director Peter Vessenes leads New Alchemy. He launched the first venture-capital-backed Bitcoin company in 2011, was the co-founder of the Bitcoin Foundation, and holds a patent for deanonymizing Bitcoin. His team members at New Alchemy are experts in the areas of business development, investment banking, and fundraising. New Alchemy ran and managed multiple projects that raised over $200M including Monolith Studios, Funfair, and TokenCard.

1.3. Problem and Product Solution

Many students and professionals dream of building real products. However, not many achieve this goal because they lack the real skills needed to build a product from the fields of artificial intelligence, cybersecurity, game development, data science, blockchain, and programming. It is easy for anyone to take introductory courses on a topic online and claim to have completed it. Udemy and Lynda do not teach how to build real products from beginning to end. Many people give up on these sites after learning the basic curriculum because they cannot build real-world applications after completing the basic theoretical modules. Beginners can easily find places online to learn basic introductory courses on Udemy, Pluralsight or Lynda.com. Those courses are basic and do not necessarily teach the practical skills needed to build a real product. Students get stuck and give up after they have finished beginner courses and want to build real products. There is no platform that teaches intermediates and experts on how to build real products. This is the exact problem Education Ecosystem solves. Focused on viewers who already have basic knowledge on a topic, the platform uses practical projects to teach them how to build real products from scratch and gives them project files to download and practice with. Education Ecosystem does not create content itself but provides a monetization network for project creators to teach projects. Viewers are able to:

- Watch and learn how to build complete products.

- Watch the archived videos.
- Download videos and project files to practice with.
- Be in a supportive peer-to-peer knowledge-sharing community.
- Improve their job market skills and make more money in their careers.

1.4. Market and Competition Analysis

"The global market for training expenditures in 2017 was about $360 billion."[2] North America dominates this market with 44%. Companies and individuals continue to spend large amounts of money on professional development.
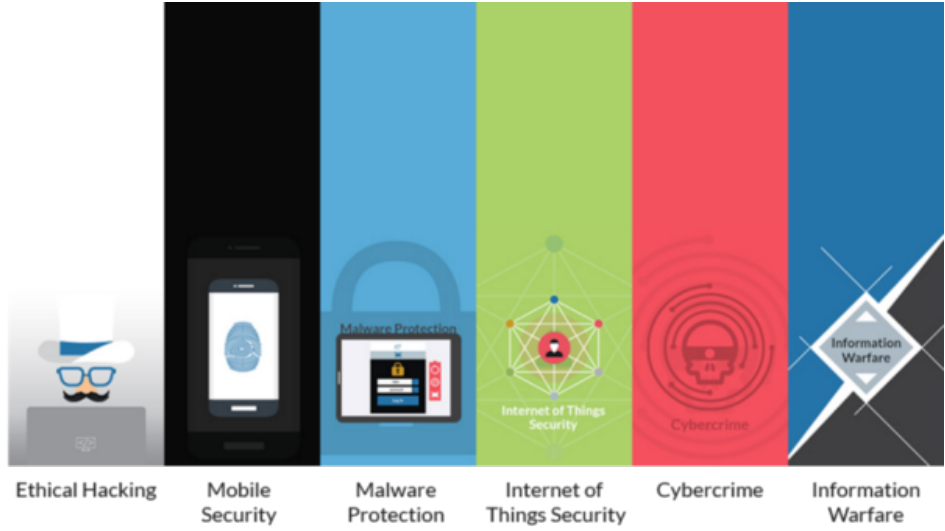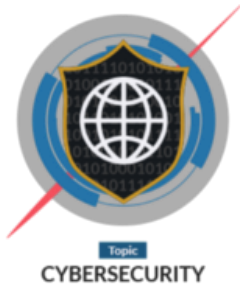
More people worldwide are using learning platforms in order to improve their skills and meet the practical requirements for new jobs and to satisfy their own curiosities. Trends emerging in the industry include live streaming learning, peer-to-peer learning, advanced self-learning, project-based learning, mentorship-based learning, gamified learning, and group-based learning. Note that the market for AI and blockchain education is nascent and not covered by any player yet. Education Ecosystem does NOT compete directly with existing professional development platforms as the focus is on practical projects (project-based learning) and users who have passed the beginner stage (intermediates, experts).

2. Education Ecosystem Network and API

2.1. List of Topics and Categories

Education Ecosystem covers six topics: artificial intelligence, blockchain, cybersecurity, game development, data science, and programming. Each of these six topics contains its own sub-categories. The company initially focused on building projects for the programming category. Programming currently has the largest content volume. Token sale proceeds will be used to incentivize project creators to scale up projects on the network.

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[2] Size of the Training Industry. Training Industry. April 20, 2017.
https://www.trainingindustry.com/blog/outsourcing/how-big-is-the-training-market/.

Topic
CYBERSECURITY

| Ethical Hacking | Mobile Security | Malware Protection | Internet of Things Security | Cybercrime | Information Warfare |

Topic
GAME DEVELOPMENT

| Unreal Engine | Love2d | Game Maker | Unity | Gamedev |

Topic
DATA SCIENCE

Wolfram Language | Data Visualization | Data Mining | Data Analytics | Text Processing | Big Data

Topic
PROGRAMMING

170+ Categories

Javascript | PHP | Java | Bootstrap | HTML5 | Objective C

Blockchain Basics — Ethereum — Smart Contract — Cryptocurrency Mining — Bitcoin — Token Sale
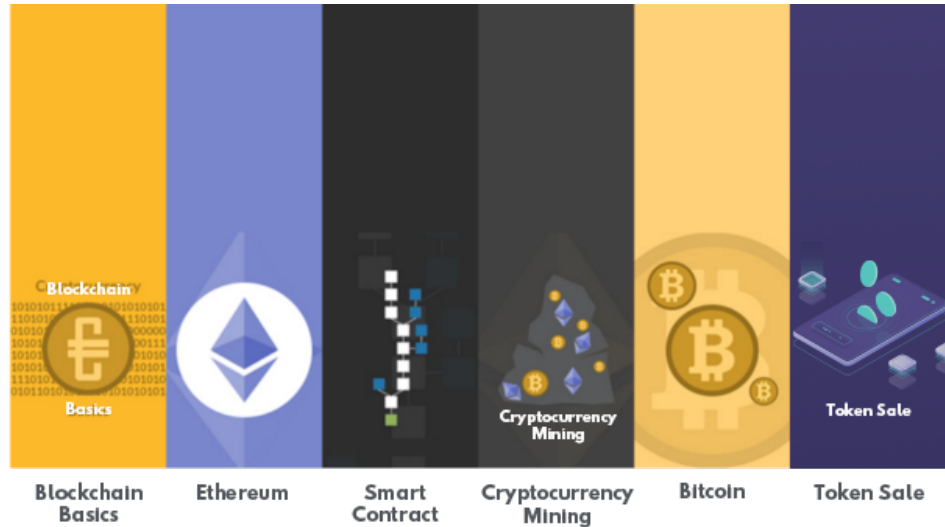
2.2. Main Product Features: Videos and Chat

Content on Education Ecosystem is organized around projects. Each project is delivered in video format. The platform is currently centered around free projects. This will change to paid projects in the future when the content volume has increased. Videos can be watched in HTML5 or flash and are delivered in three quality formats 480p, 720p, and 1080p. Even though the company does not yet have native mobile apps, video projects can be watched in HTML5 on smartphones and tablets. The platform does not currently offer a mobile app due to product development uncertainties worsened by Google Playstore and Apple Appstore who have adopted a hostile stance on blockchain startups. The vague app submission policies do not explicitly draw the line between what leads to the acceptance or rejection of mobile apps on app stores.

Developing mobile apps is costly. Education Ecosystem has to spend as much as $500,000 a year to hire only four engineers to build an app. Because of the high cost and uncertainty, the startup has been forced to deviate from the original roadmap and focus on desktop products. This is a huge blow to the company as Android and iOS are the biggest operating systems for mobile devices. Android and iOS collectively made up 87 percent of the global market share for smartphone operating systems in 2019.

For this reason, Education Ecosystem has decided not to develop its mobile apps further but rather focus on creating a responsive website that can be used on mobile as

well. A responsive HTML will ensure that the website renders well on every device irrespective of the screen size, device or platform.

2.3. Projects

Projects are created with the sole intention of teaching viewers. They are fully narrative, structured, contain well-drafted project descriptions, streamed on a weekly schedule, and have downloadable project resources. The creation of projects undergoes a strict content moderation process to ensure the highest quality standard. Creating a project requires the project creator to spend time preparing the content. Project creators selected for projects have real industry experience and have spent at least four years working in their fields. Project creators love teaching and sharing their skills to train and educate the next generation to improve their practical career skills. In order to decide which projects to create, Education Ecosystem has a project request board on the site, where viewers submit project suggestions and then other viewers upvote or downvote the idea. Listed below are examples of projects, from the fields of data science and programming, that expand on how peer-to-peer platform teaches viewers how to build real products:

Project Title: [Python Data Analytics and Visualization](#)

Ryan Schuetz, a developer from Minneapolis, United States, with over eight years of experience; covers all facets of building a complete and operational analytical dashboard. Viewers are guided through all the steps and concepts, starting from setting up a new Django project, building an ORM model, business logic, math functions, and visualizing data using JS libraries (D3, NVD3, Charts.js). Ultimately, viewers will be able to create their own data analytics and visualization application.

Project Title: [How to Create a Dating Web App in Node.js](#)

Igor Kuzmenko, a software engineer from Odessa, Ukraine who resides in Basel, Switzerland; explains in detail how viewers can use Node.js, MongoDB, and React.js to quickly build products. He has about eight years of experience shipping products and has founded two startups. Throughout this highly educational project, Igor covers all the details of creating a dating website so a viewer can build it from scratch, add their own features, and adapt it to their specifications.

Project Title: [Machine Learning Model: Python Sklearn & Kera](#)

Andrey Bulezyuk, a data science expert from Nuremberg, Germany with over five years of experience in Python; teaches viewers how to create two simple machine learning applications to solve a classification problem. Though simple, it is one of the most

complex problems in the world since it is about 'predicting' stock market data. Viewers can take a look at two completely different libraries; Sklearn and Keras. Before they dive into the main task, they can see what a "Hello World" in Machine Learning looks like. After that, they learn numer.ai and use their pre-defined data sets.

The platform now focuses on 'projects' because they provide the maximum educational value to viewers compared to casual streaming. In addition, viewers are willing to pay for the projects because they offer huge educational value. Viewers can watch all the projects in the categories they are interested in. Education Ecosystem's monetization is centered on consumers using a B2C model and project viewership by public institutions (high schools, libraries, colleges), businesses (B2B) and other established online education companies (boot camps, Udemy, Lynda, Codecademy, and Pluralsight).

2.4. Curriculum

Projects previously created for the network were single projects focusing on how to solve a specific problem in one of the six categories. For example, How to create a Cryptocurrency Trading Bot in Node.js in the Cryptocurrency category. However, the company will introduce projects geared towards a specific curriculum.

A curriculum will consist of a set of projects. As opposed to many single projects which are unrelated, curricula will contain batches of related projects. This essentially creates a series of projects to help viewers gain expertise in a particular skill.

An advantage of focusing on curricula instead of singular projects is that category managers can work with project creators to build curricula around a specific job market skill stated by employers in job requirements. Also, multiple project creators can build separate projects for a specific curriculum, allowing curricula to be built faster. Ultimately, as viewers complete curricula, they will then be able to establish their expertise in a particular area.

Kubernetes Curriculum

This curriculum is designed for developers and students who are already familiar with virtualizing applications with Docker. Also, this curriculum is ideal for DevOps professionals or computer scientists who want to expand their existing job skills.

As the software development market continues to evolve into the virtualization and orchestration of containers, it is time for the target group to expand their expertise in this direction.

Time planning:
Students would need to spend around 20 to 25 hours on this curriculum.

What will students learn?
At the end of the curriculum the developers should be able to know and handle the complete life cycle of their application.

Project list:

 # Preparation for automated processes:
1) How to create automated AWS infrastructure with Terraform

Show the basics and build a complete High Available Secured AWS Infrastructure.

Length: 6 to 8 hours

2) How to install automated software with Ansible

Show the basics and build the dependencies for a kubernetes cluster automated with ansible.

Length: 5 to 6 hours

 # Preparing Kubernetes Knowledge
3) How to setup a production-ready Kubernetes

Install Kubernetes the hard way from master plane over the etcd key-value storage to the node plane.
Show some alternative with Kubeadm, Rancher kubernetes Engine and TK8.

Length: 5 to 6 hours

4) Additional topics:
4.1) How to work CI / CD with Jenkins and Docker registry
4.2) How to setup ELK Stack on Kubernetes Cluster
4.3) How to monitor your Kubernetes Cluster with ELK Stack
4.4) How to log your Application on a Kubernetes Cluster with ELK Stack

Length: 5 hours

Curriculum Example

2.5. Education Ecosystem API and Third-party Apps

As Education Ecosystem seeks to position itself as the dominant professional development platform in the world, an API supports making this a reality. Authentication and access controls are performed using standard and widely supported OAuth2 protocol. The API is available over HTTPS and follows RESTful conventions. Third-party developers can build their own complete applications on top of Education Ecosystem's API. These can be bots, mobile apps, websites, widgets or plugins. Giving software developers access to the API provides a way to empower end-users to do

things the network was not built to do. One example of this is the platform's project creator, Iamvalerio, who is using the API to build an Education Ecosystem Android app.

3. LEDU Token Model

3.1. Decentralization of Learning and Professional Development

Decentralization of learning is an educational shift from conventional learning to an approach where knowledge is gained from project-based learning, peer-to-peer learning, practical learning or learning-by-doing. In contrast to traditional teacher-to-student learning, decentralized learning is multidimensional.[3] Due to the shift in learning from formal institutional training at universities to informal career-oriented learning, students and professionals are seeking practical modes of learning. According to a 2016 report by Online Learning Consortium, more than 5.8 million people have been signing up for online education each year for the last decade.[4] In a study by Class Central, it is stated that the number of students worldwide who have signed up for at least one course is 58 million.[5] Another facet of decentralized learning can be attributed to high college tuition costs. In a news report by The Washington Post, increasing college fees have driven students to seek alternative degrees. Students and professionals are instead opting towards more concise and skill-oriented training like online courses and boot camps.[6] For nascent high in-demand professions in the fields of programming, game development, artificial intelligence, and blockchain; informal learning is the only way for students to acquire the necessary skills.

A research paper by John W. Thomas, explains peer-to-peer learning as a way in which students, through mutual feedback, learn from one another to abandon misconceptions and search for better solutions[7]. A learning network like Education Ecosystem is focused on project-based peer-to-peer learning and enables users from all over the world to exchange ideas and learn from each other.

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[3]https://www.european-agency.org/sites/default/files/Decentralisation%20in%20Education%20Systems.pdf

[4] https://onlinelearningconsortium.org/news_item/report-one-four-students-enrolled-online-courses/

[5] https://www.class-central.com/report/mooc-stats-2016/

[6] https://techcrunch.com/2016/02/26/linkedin-and-the-golden-age-of-american-education/

[7]

https://www.researchgate.net/profile/William_Damon2/publication/223299779_Peer_Education_The_Untapped_Potential/links/563a44cb08ae337ef29841e3/Peer-Education-The-Untapped-Potential.pdf

Project-based learning is a mode of informal education, where you learn either by directly participating or by watching a video project. A research paper by two Australians Julie Mills and David F. Treagust found that projects linked to programming and design require a lot of people working in unison. For any learner, there is a very comprehensive and practical source of knowledge if they can learn from real-time projects.[8] Decentralized learning is probably best manifested by the process of learning by doing. A research report by Anzai, Yuichiro and Simon H.A, asserts that the 'Learning by doing' approach makes viewers acquainted with real tasks and not just some theoretical models.[9]

3.2. Use-Cases for LEDU Smart Tokens

Education Ecosystem uses the proof-of-work concept for issuing tokens on the platform. Each positive activity a viewer, project creator, site moderator or ecosystem participant completes on the network is rewarded with LEDU tokens. LEDU tokens will be fully integrated into all core modules and transactions on the learning platform. LEDU tokens are used as a payment method for all financial transactions such as rewarding project creators, positive viewer behavior, site moderators, and API developers. When LEDU tokens fully roll out and integrate into the learning network, the diagram below shows how LEDU tokens will be used in the internal ecosystem.

[8]
https://www.researchgate.net/publication/246069451_Engineering_Education_Is_Problem-Based_or_Project-Based_Learning_the_Answer
[9] Anzai, Yuichiro and Simon H.A , 1979, "The theory of learning by doing" The Journal of Psychological Review
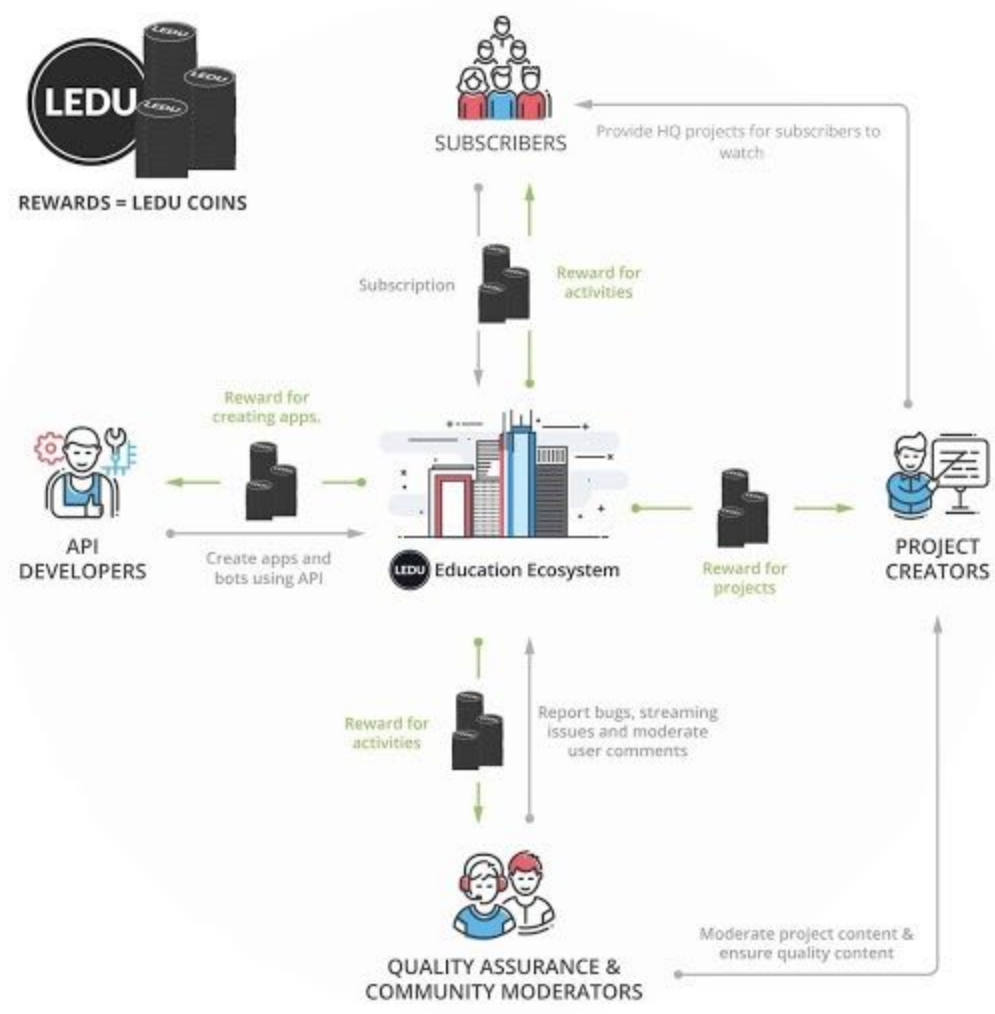
How are LEDU tokens are used on Education Ecosystem's platform

All new and existing Education Ecosystem users will be assigned a LEDU token wallet. Each user will receive a small free token amount as a starting balance. For each new user that creates an account on site, a wallet will be automatically created to store their tokens. The wallet will also be used for incoming and outgoing user token transactions.

3.2.1. Payment Method for all Financial Transactions
LEDU tokens will replace fiat payment methods as the main method of payment by users for paid projects. All payment methods that are non-LEDU are converted to LEDU since LEDU is the ecosystem's native currency.

Paid project prices on Education Ecosystem will be denominated in USD$ and not LEDU units. The total number of tokens a user will get at the time of purchase will depend on the LEDU token market price at that time.

Viewers will use the tokens for:
- downloading project files,
- sending messages,
- voting on projects,
- submitting project requests,
- requesting custom projects,
- sending personal Q&A to project creators.

Projects are currently free to watch while the platform scales up the content volume.

3.2.2. Paying Project Creators

As shown in the Education Ecosystem token utility model (see section 3.2), project creators are rewarded LEDU tokens as partial compensation for their work. 13% of all tokens minted for the purpose of the token sale are reserved for project creators and will be distributed over a 5-year period until all project creator tokens are allocated.
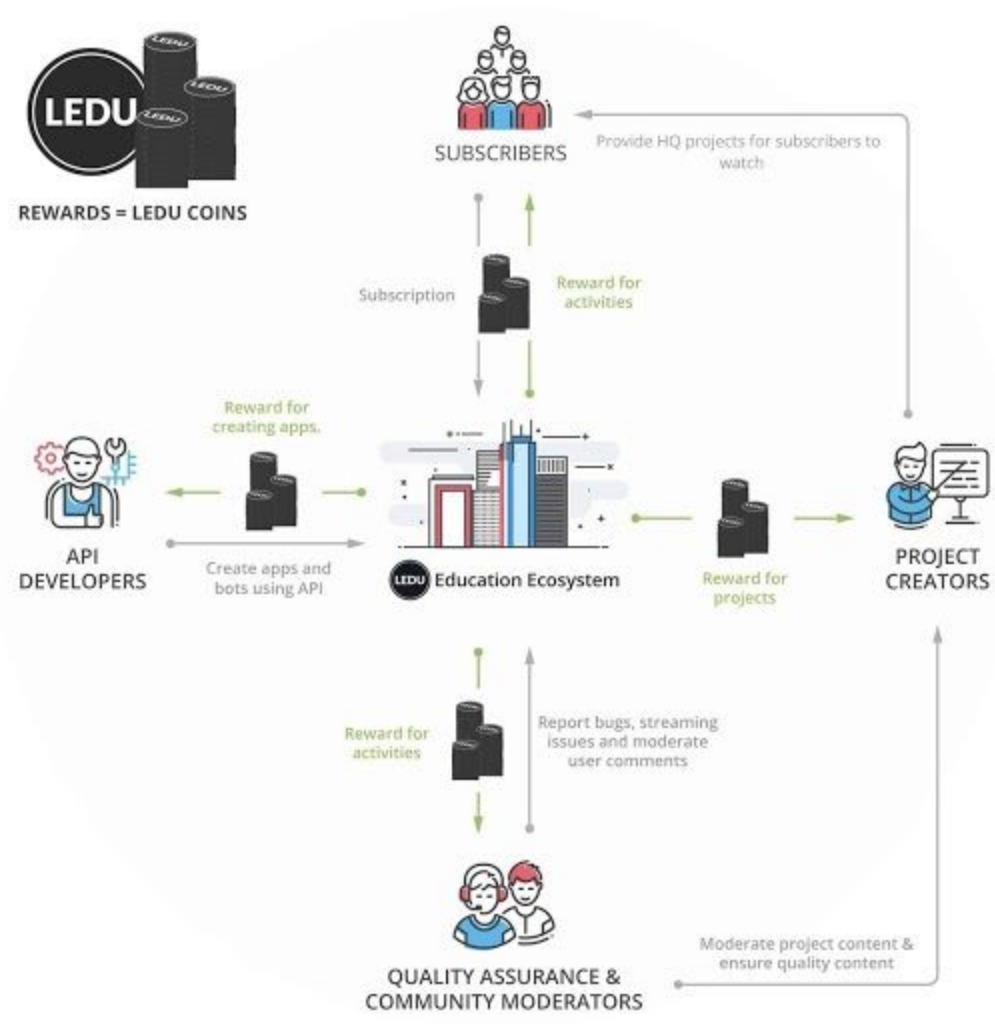
Education Ecosystem Token Utility Model

A fixed amount of 2.8 % (1/36 months = 2.8%) of the original total project creator tokens will be distributed each month. The amount of LEDU tokens allocated monthly to each project creator is calculated based on their proportional view-time. The proportional view time of a project creator is their total view time divided by total Education Ecosystem view time. Total Education Ecosystem view time is the sum of the view time of all videos on the platform for a given month. The total project creator view time is the sum of the view time on all of their videos for a given month. The number of tokens to be allocated is simply calculated by multiplying the proportional view time by the total number of fixed monthly tokens.

$$T_{PC} = (T_{PCVT}/T_{EEVT}) * T_{FMT}$$

T_{PC} = total number of tokens allocated to a project creator monthly
T_{PCVT} = total monthly project creator view time
T_{EEVT} = total monthly Education Ecosystem view time
T_{FMT} = total number of fixed monthly tokens

3.2.3. LEDU Token Utility Activities for Viewers

Viewers on Education Ecosystem will be rewarded for each positive learning activity they complete. The activities include:

- watching project video playlists,
- total monthly view time,
- submitting project suggestions,
- inviting friends and
- following projects.

For each activity a viewer completes successfully, a tiny token fraction will be allocated. The total number of tokens to be allocated to a viewer at a given period (e.g monthly) is the sum of all tokens the viewer has earned:

$$T_{TS} = \sum_{i=1}^{n} T_S$$

T_{TS} = total tokens allocated to the viewer
T_S = sum of tokens for each desired viewer activity completed

3.2.4. LEDU Token Rewards for Quality Assurance and Site Moderation

Quality assurance encompasses reporting bugs, technical streaming issues, video quality issues, and content moderation. The platform's users will be allocated tokens for each quality assurance activity. Quality assurance is important as it improves the user experience for all viewers and project creators. Site moderators represent an integral part of the Education Ecosystem community and without them, the site cannot run. Paying site moderators with LEDU tokens for their time will motivate them to carry out site moderation weekly.

$$T_{TMQ} = \sum_{i=1}^{n} T_{MQ}$$

T_{TMQ} = total tokens for site moderation or quality assurance
T_{MQ} = sum of tokens for each moderation or quality assurance activity completed

3.2.5. LEDU Token Rewards for Education Ecosystem API Developers

LEDU tokens will be allocated to developers for each application developed on top of the Education Ecosystem API that is deployed and used by at least 1000 end users. The best apps and bots will be endorsed by Education Ecosystem and shared with all users. The amount of tokens for each app developed is the sum of the base amount plus additional tokens depending on popularity, quality of the app, and availability of source code for others:

$$T_{AD} = BTA + \sum_{i=1}^{n} TA_{API}$$

T_{AD} = total tokens per app developed
BTA = base token amount
TA_{API} = sum of tokens for each API development activity completed.

4. Technical Implementation of LEDU Tokens
4.1. Smart Contract Implementation

The LEDU smart contract is fully implemented and set up by the experienced blockchain advisory firm New Alchemy, as mentioned in section 1.2. The token is based on the ERC-20 standard with minimal deviations.

4.2. Crowdsale Objective and Token Allocation

The money will help the company scale faster by getting more project creators on board to create quality projects, expand streaming cluster infrastructure, improve marketing efforts, and the expansion of team size and the number of countries served. For the token distribution, the fixed percentage split is displayed in the table below.

Token Allocation	Percentage
Crowdsale to buyers	50%
Subscription pool (user token purchases)	10%
Project creators	13%
Team	13%
Token sale Legal and Technical Advisory, Bounty Program, Token sale Marketing	6%
API Developers	3%
Supporters (Quality Assurance and Site Moderation)	3%
New Viewer Tokens	2%
Total	100%

If after five years all the project creator, supporter, and API tokens run out; all future token incentives for them will be funded from a new pool using a blockchain smart contract. The smart contract is audited by the smart contract guru Bok Pooh.

Because the Education Ecosystem team has worked on the product for some time, the vesting schedule for team-member LEDU tokens is as follows: twenty-five percent (25%) will be allocated immediately and seventy-five percent (75%) over the next eighteen-month (18) period. Team members cannot sell more than twenty-five percent (25%) of their tokens per year, in the first two years.

Education Ecosystem will ultimately succeed or fail, based on the content quality of the projects created by project creators. If the projects are educational, structured, and of high quality, viewers will pay for them. The ecosystem wants to attract the best project creators. As with building any marketplace business, the supply side (content) needs to be built first. Thus, Education Ecosystem needs to quickly build a huge initial project library by incentivizing project creators generously. There are three possible ways Education Ecosystem can cover the initial project creator acquisition cost: i) cash ii) LEDU tokens iii) mix of cash and LEDU tokens. Option 1 requires the company to raise a huge amount of cash just for content generation. This option is not ideal because it does not intrinsically enforce project creator loyalty. Option 2 will not be very attractive

to project creators because at launch there will neither be a huge organic demand for tokens nor trading on exchanges. Option 3 is the best approach for Education Ecosystem to incentivize project creators to create exclusive quality content.

13% of tokens minted during the token sale were used to partially fund the project creator acquisition cost. This will be distributed to them over a five-year period. The monthly allocation will follow the formula defined in section 3.2.2.

Token holders will have voting rights for key decisions in the ecosystem; for example, advising on which new categories or product features to add.

4.3. Use of Funds

Education Ecosystem's main business objective centers on building 10,000 projects for each of the six categories over a five-year period. The learning network plans to use proceeds in the following way:

- Building Projects (15%).
- Team Member Expansion (35%): Hiring new team members: engineers, product manager, marketing officer, head of curriculum, and head of sales.
- Network Development and Server Costs (25%): Integration of LEDU token into the ecosystem.
- Marketing (15%).
- Overhead (10%).

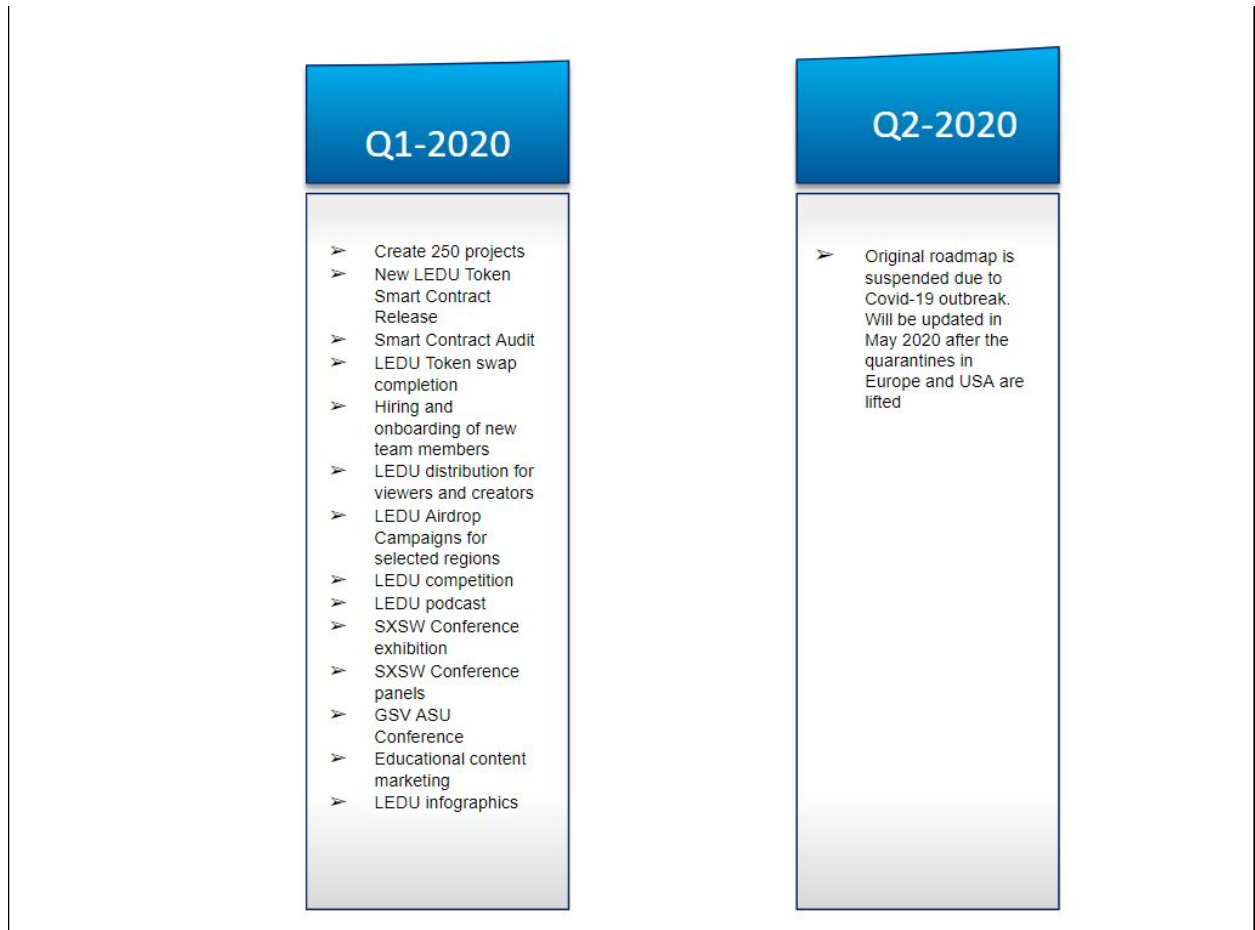# 5. Roadmap and Future Potential Developments

5.1. Roadmap and Token Sale Risk Factors

The roadmap outlines the planned milestones for the company in the next two quarters ahead.

The purchase of LEDU tokens in a crowdsale does not represent a right of equity ownership of the company itself. There are typically a variety of risk factors associated with a token sale. Education Ecosystem does not guarantee any profits or that there will be a successful exit via an IPO or trade sale. The company does not have control over the token price and all token buyers are to be aware that the price can drop to zero or

lose over 90% in value due to the high volatility of the leading cryptocurrencies Bitcoin and Ethereum which have a huge leverage impact on all other smaller cryptocurrencies.

The company ran its token sale through its legal entity Livecoding Ltd registered in London with the company registration number 09346459.

Q1-2020
- Create 250 projects
- New LEDU Token Smart Contract Release
- Smart Contract Audit
- LEDU Token swap completion
- Hiring and onboarding of new team members
- LEDU distribution for viewers and creators
- LEDU Airdrop Campaigns for selected regions
- LEDU competition
- LEDU podcast
- SXSW Conference exhibition
- SXSW Conference panels
- GSV ASU Conference
- Educational content marketing
- LEDU infographics

Q2-2020
- Original roadmap is suspended due to Covid-19 outbreak. Will be updated in May 2020 after the quarantines in Europe and USA are lifted

5.2. Future Potential Development

Education Ecosystem cannot predict the future but has the following ideas in mind:
- Localized content for the Chinese, Korean, Japanese, Spanish, German, Portuguese, and Arabic markets.
- Content catalog expansion to include more topics just as YouTube and Spotify did.
- The company's billboard screens in big metropolitan cities around the world where people can watch video projects. The targeted major cities are San Francisco, New York, Toronto, Dubai, London, Berlin, Paris, Moscow, Beijing, Seoul, Tokyo, and Sao Paulo.

5.3. Conclusion

Education Ecosystem is building a global professional development ecosystem, the Netflix for professional development. The learning network is developing a project-based platform for improving career skills for intermediates and experts, targeted towards the $360B professional development industry. The ecosystem's mission is to be the place on the web for project-based learning by building the world's largest project-based learning network. LEDU tokens are the ecosystem's native currency. The tokens are integrated into the product to manage incentives in a way that benefits all network participants.